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10/674,976	09/30/2003	Gerald Francis McBrearty	AUS920030642US1	4954

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IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER	
DOAN, DUC T	

ART UNIT	PAPER NUMBER
2188	

DATE MAILED: 01/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/674,976	MCBREARTY, GERALD FRANCIS	
	Examiner	Art Unit	
	Duc T. Doan	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Response to Amendment

Claims 1-29 are in the application.

Claims 1-29 were pending in this application. In response to the last Office Action, Claims 21-22 were amended. As a result, claims 1-29 are remain pending in this application.

Claims 1-29 are rejected.

All rejections and objections not explicitly repeated below are withdrawn.

Applicant's arguments filed 1/17/06 have been fully considered but they are not persuasive. Therefore, the rejections from the previous office action are respectfully maintained with changes as needed to address the amendments.

Specifications

The disclosure is objected to because of the following informalities:

Examiner notes that in the phone interview 9/24/2006, applicant agrees to amend the specification page 19 lines 7-8 from "Normally, an application will skip over the LVCB area of the logical volume manager." to "Normally, an application will skip over the LVCB area of the logical volume."

Appropriate correction is required.

Claim Rejection 35 USC 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-29 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 21 directs to a product embodied in a computer readable medium. Specification page 20 describes "computer readable media include recordable-type media such as RAM ... and transmission-type media..", the specification does not specifically require the computer readable medium only has the storage type media. Thus the computer readable medium as cited in claim 21 is non-statutory.

All dependent claims are rejected as having the same deficiencies as the claims they depend from.

Claim Rejections - 35 USC # 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matterwhich was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claim recites "..wherein the new device type is added to **a metadata within the logical volume manager**". Examiner cannot find the support in the specification for a metadata within the logical volume manager. The specification pages 9 describes "the metadata is contained within the LVCB" and the LVCB is an area within the logical volume". Specification pages 19, lines 1-10 further describes the method in the instant disclosure allowing an application writing the LVCB area within the logical volume. Normally the application would skip over the LVCB area of the logical volume manager. It appears the above recitation, as stand, does not point out the inventive matter of the instant application. Since the inventive method directs to the LVBC area of the logical volume, whereas normal method directs to the LVCB area of the logical volume manager. (see also specification objection).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3,6-14,16-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Mcmichael et al (US Pub 2003/0023826) and in view of Gao (US Pub 2003/0163578).

As for claim 1, Mcmichael describes a method for controlling the behavior of an application when storing data using a logical volume manager, comprising: creating a logical volume (Mcmichael's page 1 paragraph 13); setting a new device type for the logical volume (Mcmichael's page 6 paragraph 60; enumerates volume device objects; stored by device names), wherein the new device type is added to a metadata within the logical volume manager (Mcmichael's page 6 paragraph 60-62 describes volume manager enumerates a new device object for the volume) ; and adding a new device with the new device type (to a kernel space (Mcmichael's page 5 paragraph 55 describes partition managers and other code modules operate in operating system kernel). Although Mcmichael describes a new device is enumerated, Mcmichael does not describe the associating metadata structure for the new device. However, Gao' Fig 2,3 page 1 paragraphs 4-11 describes a device driver configured to support media data types. The device driver is capable of providing the "metadata" of media types it can support to the data link user. It would have been obvious to one of ordinary skill in the art at the time of invention to include media data type as suggested by Gao in Mcmichael's system so that the user-level application (data link user) may query the device driver (data link provider) to determine a type of medium the provider supports, and thereby it can tailor its mode of operation accordingly. All dependent claims are subjected to the same rejection based on the rational described above.

As for claims 2-3,6-8 Gao's pages 2-3 describes the snoop utility can issue ioctl calls to obtain in detail more configuration information corresponding to the device driver's media type, as follows:

As for claims 2-3, the claims recite wherein the step of creating the logical volume includes supplying the logical volume manager with a new device type for the logical volume (claim 2; page 2 paragraphs 18,23,24); using the new device type to indicate to the application that the application may perform a particular behavior defined by the new device type (claim 3; page 2 paragraphs 19 if media type is Ethernet, the snoop utility operates accordingly).

As for claims 6-7 the claims recite wherein the particular behavior defined by the new device type includes allowing the application to enable a new feature within the application (claim 6, Gao's page 4 example 1 PPP_Ipv6 illustrates features associating with Ethernet_Ipv6 protocol); wherein the particular behavior defined by the new device type includes allowing the application to reduce a currently supported feature set within the application (Claim 7, Gao's page 4 Example 1 PPP_Ip illustrates features associating with Ethernet_IP protocol).

As for claim 8, the claim recites wherein the particular behavior defined by the new device type includes allowing the application to prevent older versions of the application from using the logical volume. The claim rejected based on the same rationale as in the rejection of claims 6-7. Gao's page 4 example 1 suggests the user can select to apply new version of Ethernet protocol over an old version).

As for claim 9, the claim recites wherein the particular behavior defined by the new device type includes allowing the application to test the application's expected behavior on a different volume manager. The claim rejected based on the same rationale as in the rejection of

claims 2-3. Gao's page 2 paragraph 15 further describes in an embodiment of using the device type whereas data link user (corresponds to claim's application) can adaptive learning from the different formats processed by a data link provider. Thus Gao cleary suggests trying out new formats defined by device type and adaptive learning from the response behaviors.

As for claim 10, Mcmichael describes wherein the new device typeset for the logical volume is non-changeable for the life of the logical volume (Mcmichael's page 6 paragraph 60, the volume device name is guaranteed to be unique during a boot session).

Claims 11,12 rejected based on the same rationale as in the rejection of claim 1.

Claim 13 rejected based on the same rationale as in the rejection of claim 2.

Claim 14 rejected based on the same rationale as in the rejection of claim 3.

Claim 16 rejected based on the same rationale as in the rejection of claim 6.

Claim 17 rejected based on the same rationale as in the rejection of claim 7.

Claim 18 rejected based on the same rationale as in the rejection of claim 8.

Claim 19 rejected based on the same rationale as in the rejection of claim 9.

Claim 20 rejected based on the same rationale as in the rejection of claim 10.

Claims 4-5,15 rejected under 35 U.S.C. 103(a) as being unpatentable over Mcmichael et al (US Pub 2003/0023826), Gao (US Pub 2003/0163578) as applied to claims 3,14 respectively and further in view of Irwin, Jr et al (US 5566331).

As for claims 4-5, the claims recite wherein the particular behavior defined by the new device type includes allowing the application to determine a location to begin writing data in a database (claim 4; Irwin's column 17 lines 1-7 describes of a new device driver capable of to

translate I/O functions into I/O commands of a specific architecture of storage device associated with the personality module); wherein the location to begin writing data in the database includes block zero of the logical volume control block (claim 5; Mcmichael describes a partition manager capable of detect available partitions in storage devices, page 4 paragraphs 37,42; to present partitions of a disk to logical volume manager, page 5 paragraphs 47-48; Mcmichael describes the flexibility of the internal logical representation of each of partitions and logical volumes in the system such as the first partition can be relocated to any storage device; Mcmichael's page 1 paragraphs 5-10). It would have been obvious to one of ordinary skill in the art at the time of invention to include the device driver as suggested by Irwin in Mcmichael's system to allow the system to deal with several different types of block storage devices (Irwin's column 16 lines 53-55).

Claim 15 rejected based on the same rationale as in the rejection of claim 5.

Response to Arguments

Applicant's arguments in response to the last office action has been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

As to the remarks on pages 8-10 concerning the claim 1.

A) Applicant argues that the claim recites "...the metadata within the logical volume manager". Examiner cannot find the support in the specification for a metadata within the logical volume manager. The specification pages 9 describes, "the metadata is contained within the LVCB" and the LVCB is an area within the logical volume". Thus the specification clearly

describes the metadata is inside LVCB block within the logical volume. (see also specification objection).

B) the claim recites " adding a new device with the new device type to a kernel space". McMicheal's paragraph 55 clearly describes kernel modules (corresponds to claim's kernel space) work with volume manager to provide access to physical storage devices. McMicheal's paragraph 60,61 further describes one of the step is enumerating a new volume device object and its associated new logical volume. Each logical volume has unique attributes that it maintained in its metadata structure (McMicheal gives an example that the attribute indicates the type of the logical volume such as stripped set type; paragraph 61), thus when this new logical volume is created, obviously kernel modules must tracks this new logical volume by adding it into its space.

Claims 11,12,21 are rejected based on the same rationale as in the rejection of claim 1.

As for remarks on page 10 for claim 2, applicant appears to argue "supplying the logical volume manager with device type..". It's rejected based on the same rationale as indicated in above paragraphs. Gao further teaches a method using ioctl calls to obtain details information such as device driver's media type. Thus using method taught by Gao, the device type information can be provided to the logical volume manager.

As for remarks on page 10 for claim 3, it's rejected based on the rational in above paragraphs. Both McMicheal and Gao shows device type of a logical volume and its device driver is used to indicate various type of devices, for example striped set type device (McMichael's paragraph 61), Ethernet type device (Gao's paragraph 19).

As for the remark on page 11 for claims 6-8, it's rejected based on the rational in above paragraphs. Gao's page 4 clearly teaches the device type field is used to enable a new feature within the application, and using this information to reduce a currently supported feature set within the application. Although, Gao uses an example of the device type indicating different Ethernet versions, however Gao clearly teaches that the device type is used accordingly and to reduce the feature set within the application. It's would be obviously to apply the above teaching by Gao to other device types.

As for the remark on page 12 for claim 9, it's rejected based on the rational in above paragraphs, Gao's page 2 paragraph 15 further describes in an embodiment of using the device type whereas data link user (corresponds to claim's application) can adaptive learning from the different formats processed by a data link provider. Thus Gao clearly suggests trying out new formats defined by device type and adaptive learning from the response behaviors.

As for the remark on page 11 for claim 11, it's rejected based on the rational in above paragraphs in claim 1 rejections.

As for the remark on pages 13-14 for claim 4, it's rejected based on the rational in above paragraphs in claim 1 rejections. For the argument "...defined by the new device type.." please see the response for claim 1.

As for the remark on pages 13-14 for claims 4 and 5. These claims are dependent of claim 1. Therefore they are rejected based on the same rationale as in the rejection of claim 1.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Applicant's amendment filed 8/18/03 necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin L. Ellis
Primary Examiner